

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Nesbitt Ward Hagood, IV and Jeffrey B. Colter  
Application No.: 10/811,311 Group Art Unit: 2834  
Filed: March 26, 2004 Examiner: N/A  
Confirmation No.: 9664

Title: System for Optimal Energy Harvesting And Storage  
From An Electromechanical Transducer



CERTIFICATE OF MAILING OR TRANSMISSION	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or is being facsimile transmitted to the United States Patent and Trademark Office on:	
Sept. 16, 2005	Elaine Leahy
Date	Signature
Elaine Leahy	
Typed or printed name of person signing certificate	

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or  
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or  
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
  - ☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
  - ☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):  
Applicant requests that the IDS and cited reference(s) be placed in the application file.  
(Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
  - ☒ Copies of the cited references are enclosed.
    - ☒ Copies of issued U.S. patents and published U.S. applications are not required and are not being provided.
  - ☐ Copies of the cited references are enclosed except those entered in prior application, U.S. Application No. 10/392,371, to which priority under 35 U.S.C. 120 is claimed. The earlier application contains copies of the cited references.
  - ☐ The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
  - ☐ The "concise explanation" requirement (non-English references) for reference(s) [       ] under 37 CFR 1.98(a)(3) is satisfied by:
    - ☐ the explanation provided on the attached sheet.
    - ☐ the explanation provided in the Specification.
    - ☐ submission of the enclosed International Search Report.
    - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
    - ☐ the enclosed English language abstract.

☐ Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_\_ U.S. Patent Application No. [     ], by [inventor(s)], filed [     ], Docket No.: [     ]

\_\_\_\_\_ U.S. Patent Application No. [     ], by [inventor(s)], filed [     ], Docket No.: [     ]

\_\_\_\_\_ U.S. Patent Application No. [     ], by [inventor(s)], filed [     ], Docket No.: [     ]

\_\_\_\_\_  
Examiner

\_\_\_\_\_  
Date

☐ A copy of each above-cited application, including the current claims, is enclosed, except any application filed on or after June 30, 2003, which has been scanned into the PTO's Image File Wrapper (IFW) system and is available to the examiner.

☐ A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [     ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.

☐ Please charge Deposit Account 08-0380 in the amount of \$[     ]. A copy of this Statement is enclosed.

☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

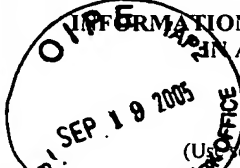
Respectfully submitted,

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Concord, MA 01742-9133

Dated: 9/16/05

PTO-1449 REPRODUCED		ATTORNEY DOCKET NO. 3525.1002-001		APPLICATION NO. 10/811,311	
 <p>July 7, 2005 (Use several sheets if necessary)</p>		FIRST NAMED INVENTOR Nesbitt Ward Hagood, IV		FILING DATE March 26, 2004	
		EXAMINER N/A		CONFIRMATION NO. 9664	
				GROUP 2834	

## U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL	REF. NO.	DOCUMENT NUMBER Number-Kind Code (if known)	ISSUE DATE / MM-DD-YYYY	NAME OF PATENTEE OF CITED DOCUMENT
	AA	6,222,954 B1	04-24-2001	Riza
	AB	6,263,123 B1	07-17-2001	Bishop et al.
	AC	6,137,941	10-24-2000	Robinson
	AD	5,177,348	01-5-1993	Laor
	AE	6,556,285 B1	04-29-2003	Dickson
	AF	6,411,751 B1	06-25-2002	Giles et al.
	AG	6,484,114 B1	11-19-2002	Dickson
	AH	5,450,508	09-12-1995	Decusatis et al.
	AI	4,657,339	04-14-1987	Fick
	AJ	6,345,134	02-05-2002	Laming et al.
	AK	6,788,844	09-07-2004	Ng, Eddie Kai Ho
	AA2	2003/0048984	03-13-2003	Ng, Eddie Kai Ho
	AB2			
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	AC3			

EXAMINER	DATE CONSIDERED
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<b>PTO-1449 REPRODUCED</b>  <b>INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION</b>  <b>July 7, 2005</b>  (Use several sheets if necessary)	<b>ATTORNEY DOCKET NO.</b> 3525.1002-001		<b>APPLICATION NO.</b> 10/811,311	
	<b>FIRST NAMED INVENTOR</b> Nesbitt Ward Hagood, IV		<b>FILING DATE</b> March 26, 2004	
	<b>EXAMINER</b> N/A		<b>CONFIRMATION NO.</b> 9664	<b>GROUP</b> 2834

### FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER Country Code-Number-Kind Code (if known)	DATE MM-DD-YYYY	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION YES NO	
	AL	WO 03/016980 A1	February 27, 2003	Glimmerglass Networks, Inc.		
	AM	WO 03/016958 A2	February 27, 2003	Glimmerglass Networks, Inc.		
	AN	WO 00/76106 A1	December 14, 2000	Astarte Fiber Networks, Inc.		
	AO	WO 02/01274 A2	January 3, 2002	Megasense		
	AP					
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	AQ4					

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
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PTO-1449 REPRODUCED  <b>INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION</b>  July 7, 2005  (Use several sheets if necessary)	ATTORNEY DOCKET NO. 3525.1002-001		APPLICATION NO. 10/811,311	
	FIRST NAMED INVENTOR Nesbitt Ward Hagood, IV		FILING DATE March 26, 2004	
	EXAMINER N/A	CONFIRMATION NO. 9664	GROUP 2834	

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

AR	Ford, J. E., <i>et al.</i> , "Micromechanical Fiber-Optic Attenuator with 3 $\mu$ s Response," <i>Journal of Lightwave Technology</i> , 16(9):1663-1670 (1998).
AS	Datta, K. B. and Mohan, B. M., "Chapter 4: Analysis of Time-Delay Systems," pp. 127-129, and "Chapter 8: Optimal Control of Linear Systems," pp. 213-234, in <i>Orthogonal Functions in Systems and Control</i> (Singapore: World Scientific Publishing Co. Pte. Ltd.) (1995).
AT	Patra, A. and Rao, G. P., "Continuous-time Model-based Self-tuning Control." In <i>General Hybrid Orthogonal Functions and their Applications in Systems and Control</i> , M. Thoma, ed. (London: Springer-Verlag London Limited), pp. 71-84 (1996).
AU	Riza, N. A. and Sumriddetchkajorn, S., "Versatile multi-wavelength fiber-optic switch and attenuator structures using mirror manipulations," <i>Optics Communications</i> , 169:233-244 (1999).
AV	Sumriddetchkajorn, S. and Riza, N. A., "Fault-tolerant three-port fiber-optic attenuator using small tilt micromirror device," <i>Optics Communications</i> , 205:77-86 (2002).
AW	Ji, C., <i>et al.</i> , "Electromagnetic Variable Optical Attenuator," <i>IEEE/LEOS International Conference on Optical MEMs conference digest</i> , pp. 49-50 (2002).
AX	Li, J., <i>et al.</i> , "A Micromachined Variable Optical Attenuator (VOA)," <i>Proceedings of the SPIE - International Society for Optical Engineering</i> , 4582:112-120 (2001).
AY	Endow, Y., "Optimal Control Via Fourier Series of Operational Matrix of Integration," <i>IEEE Transactions on Automatic Control</i> , 34(7):770-773 (1989).
AZ	Palanisamy, K. R., "Analysis and optimal control of linear systems via single term Walsh series approach," <i>Int. J. Systems Sci.</i> , 12(4):443-454 (1981).
AR2	Razzaghi, M., "Solution of Linear Two-point Boundary Value Problems via Fourier Series and Application to Optimal Control of Linear Systems," <i>Journal of the Franklin Institute</i> , 326(4):523-533 (1989).
AS2	Elvin, N.G., Elvin, A.A., Spector, M., <i>A Self-Powered Mechanical Strain Energy Sensor</i> , Institute of Physics Publishing, Smart Matter Struct. 10 (2001) 293-299

EXAMINER	DATE CONSIDERED
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